

CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (previously presented) A manufacturing system comprising:

a discharger for discharging a liquid material having fluidity onto a substrate;

communication means for transmitting and receiving data through a

communication line; and

monitoring means for monitoring the state of the discharger and for outputting data obtained by the monitoring through the communication means.

2. (previously presented) The manufacturing system according to claim 1, wherein the monitoring means determines whether or not an abnormality has occurred based on the monitor data, and outputs a warning signal through the communication means when an abnormality has occurred.

3. (previously presented) The manufacturing system according to claim 1, wherein when the monitoring means receives a control command through the communication means, the monitoring means controls operation of the discharger in accordance with the control command.

4. (previously presented) The manufacturing system according to claim 1, wherein the discharger comprises a liquid drop discharge head for discharging the liquid material,

and a drive circuit for outputting a drive signal for controlling the discharging carried out by the liquid drop discharge head; and

at least one of a drive signal input portion of the liquid drop discharge head and the drive circuit are shielded so as not to be accessible from the outside.

5. (previously presented) The manufacturing system according to claim 4, wherein the liquid drop discharge head is provided with a specific identification number, the discharger further comprises mounting detecting means for detecting any mounting of the liquid drop discharge head, and when the monitoring means receives a detection signal from the mounting detecting means, the monitoring means reads and outputs the identification number.

6. (previously presented) The manufacturing system according to claim 4, wherein the discharger further comprises discharge failure detecting means, the discharge detecting means detecting the discharging of the liquid material from the liquid drop discharge head when the drive signal is input, and a discharge failure of the liquid drop discharge head when the liquid material is not discharged; and

when the monitoring means receives a detection signal from the discharge failure detecting means, the monitoring means determines that an abnormality has occurred and outputs a warning signal.

7. (previously presented) The manufacturing system according to claim 6, wherein when the liquid drop discharge head comprises a plurality of nozzles for discharging the

liquid material, the discharge failure detecting means is constructed to detect a discharge failure of each nozzle.

8. (previously presented) The manufacturing system according to claim 4, wherein the discharger outputs a notification signal indicating the generation of a drive signal pulse, and the monitoring means outputs data for counting the cumulative number of dots discharged from the liquid drop discharge head based on the notification signal.

9. (previously presented) The manufacturing system according to claim 4, wherein the discharger measures an operable state time of the liquid drop discharge head, the operable state time including time for actually discharging the liquid material, maintaining the liquid material in a dischargeable state, and waiting for the discharging operation; and

the monitoring means obtains and outputs the measured operable state time.

10. (previously presented) The manufacturing system according to claim 1, wherein the discharger counts the number of manufactured products, and the monitoring means outputs a count value.

11. (previously presented) The manufacturing system according to claim 1, wherein the discharger further comprises a storage container for storing the liquid material, and remaining amount detecting means for detecting a predetermined remaining amount of liquid material in the storage container; and

when the monitoring means receives a detection signal from the remaining amount detecting means, the monitoring means outputs a notification signal for notifying that the remaining amount of liquid material has decreased to a predetermined remaining amount.

12. (previously presented) The manufacturing system according to claim 1, further comprising removal detecting means for detecting removal of any predetermined part in the discharger, wherein when the monitoring means receives a detection signal from the removal detecting means, the monitoring means determines that an abnormality has occurred and outputs a warning signal.

13-18. (cancelled)